

Saturday Magazine.

No. 635.

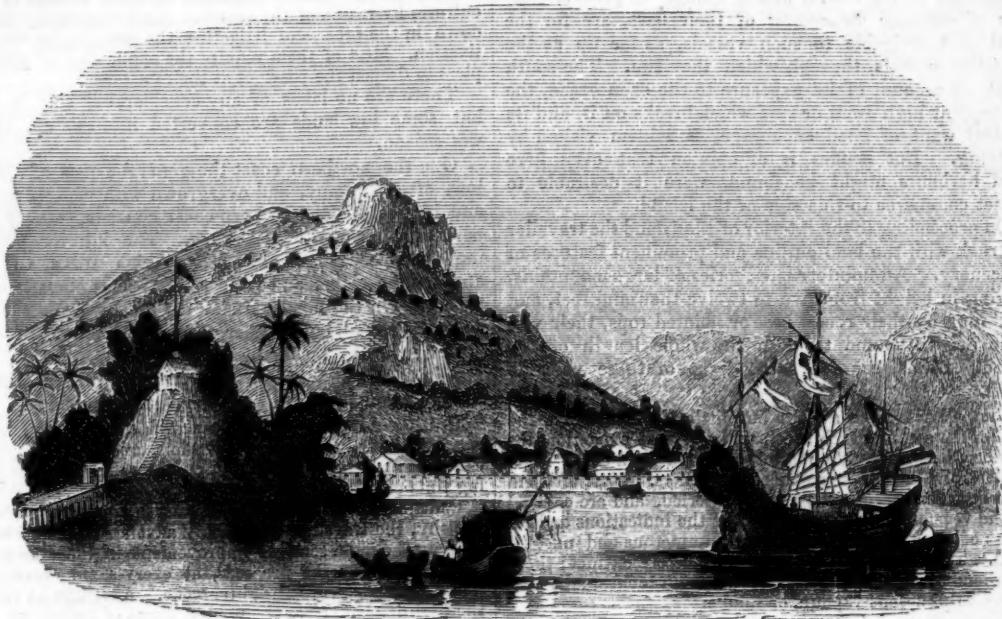
MAY

28TH, 1842.

PRICE
ONE PENNY.



JAVANESE SKETCHES.



ANYER, PORT ON THE NORTHERN COAST.

I. GEOGRAPHICAL SKETCH.

THE land known to Europeans by the name of JAVA, and to the natives under those of Tana (the land), Jáwa, or Nusa, (the island) is one of the largest of the Sunda Islands. It is situated between $5^{\circ} 52'$ and $8^{\circ} 4'$ S. lat., and between $105^{\circ} 11'$ and $114^{\circ} 13'$ E. long. On the south and west it is washed by the Indian Ocean; on the north-west by a channel called the Straits of Sunda, which separates it from Sumatra, at a distance in one point of only fourteen miles; and on the south-east by the Straits of Báli, only two miles wide, which separate it from the island of that name. The area of Java is estimated at 50,000 square miles, or about that of England.

Numerous small islands are scattered in the immediate vicinity of Java, particularly along the northern coast, which together with the projecting points and headlands inclosing the different bays contribute to form harbours of various capacities. The most important of these islands is Madúra, which is separated from the mainland of Java by a very narrow strait. This island and the small islands lying to the east are considered as dependencies of Java.

The island is for the most part in the possession of the Dutch, who claim the whole northern coast, as well as the districts situated at both extremities of the island. The southern coast and the adjacent countries (with the exception of the small district of Pachitan, recently ceded to the European government,) are divided between two native sovereigns, viz., the Susuhúnán, or emperor, who resides at Surá-kerta, on the Solo River, and the Sultan, who resides at Yug'ya-kerta in the province of Matarem. These native provinces, comprising several of the richest districts, form about one-fourth of the whole island.

VOL. XX.

The Dutch possessions are divided into seventeen provinces. To the west of $108^{\circ} 30'$ are the Bantam, Batavia, Buitenzorg and Preanger districts, and Cheribon. The Preanger districts are ruled by native hereditary princes, who pay tribute to the Dutch. The principal towns in this country are situated near the shores. Sirang or Ceram, where the governor of Bantam resides, is some miles inland, the ancient town of Bantam having been abandoned. Batavia, also, has been partly abandoned on account of its insalubrity. In the suburbs of this city is Molenvliet, built in the Dutch style, along a wide canal, and mostly inhabited by Europeans: Ryswick is the seat of the governor-general, Weltefreden the centre of the military force, and Noordwyck a trading town. Cheribon is also a thriving town, with a good roadstead. Forty miles from Batavia, and at the foot of the volcano of Pangerango, is the village of Buitenzorg, containing the summer residence of the governor, and many villas. A navigable canal unites this village with the harbour of Batavia. Chanjur is the chief town in the Preanger districts.

To the east of $108^{\circ} 30'$, as far as the Strait of Madúra, occur the nine provinces of Tegal and Brebes, Pakalongan, Kedu, Samárang, Japara, Rembang, Gresek, and Surabaya. They form the most fertile portion of the Dutch dominions, and contain the vale of Kedu, the flats of Demák, and the plain of Surabaya. Proceeding from west to east we find the following towns:—Samárang, a populous town, with an extensive commerce, in which foreign vessels are allowed to participate. The next town is Rembang. Surabaya follows next: it is situated on the Straits of Madúra, which form an excellent harbour, which is open to foreign vessels. This is the most populous and thriving town in the island.

The eastern peninsula, which extends to the Strait of

Bali, is mountainous and less fertile than any other part of the island. It contains the provinces of Passaruan, Besuki, and Banyuwangi. On the sea-coast is a small town named Passaruan.

At nearly all seasons of the year vessels of any burthen can approach all the principal stations, at a convenient distance for the barter of their merchandize. The sea being usually smooth, and the weather moderate, the native vessels and small craft always find sufficient shelter at the change of the monsoon, by running under some of the numerous islands scattered along this coast, or passing up the rivers, which, though in general difficult of entrance on account of their bars, are for the most part navigable to such vessels, as far up as the maritime capitals, through which they run. The south coast, on account of its exposure to the open ocean, the consequent high swell or surf which breaks on it, and its general want of good anchorage, is seldom visited by shipping. But Raffles is of opinion that even here good harbours might be found, were it desirable to attract commerce to this side of the island.

On proceeding to the interior of the island the traveller is struck with the bold outline and prominent features of its scenery. An uninterrupted series of large mountains, varying in height from five to twelve thousand feet, and exhibiting by their round base or pointed tops, their volcanic origin, extend through the whole length of the island. Raffles counted thirty-eight of these volcanic peaks.

They all rise from a plain but little elevated above the level of the sea, and each must, with very few exceptions, be considered as a separate mountain, raised by a cause independent of that which produced the others. Most of them have been formed at a very remote period, and are covered by the vegetation of many ages; but the indications and remains of their former eruptions are numerous and unequivocal. The craters of several are completely extinct; those of others contain small apertures, which continually discharge sulphureous vapours or smoke.

Many of them have had eruptions during late years, which have caused great loss of life and property.

Besides these larger mountains, there are extensive ranges of hills which traverse the country in various directions; indeed the surface of the island in general, except on the sea-coast, is undulating and uneven.

A mountainous country is seldom deficient in rivers: accordingly, Java is singularly favoured in the number of its streams. The size of the island does not admit of the formation of large rivers, but there are probably fifty, that in the wet season, float down rafts loaded with timber and other rough produce of the country. Five or six are always navigable to the distance of some miles from the coast. The minor streams, so precious to the agriculturist, must be reckoned by hundreds if not thousands.

The Solo river rises near the coast in the mountains of Damong, and, collecting many tributary waters, flows northward to Sura-kerta, where its stream is of considerable depth and breadth; it then bends towards the east, and is joined at Awi by the Inadion. It enters the Strait of Madúra by two mouths at Gresek and Sidayu. From Sura-kerta to Gresek it is stated to run a winding course of 356 miles, during which the navigation is free, and in the rainy season admits of boats of considerable size, which convey the produce of an extensive tract of country to the sea; and, except during the months of August, September and October, and in unusually dry seasons, it bears down boats of middling or small size during the whole year, from a considerable distance above Sura-kerta.

The river second in magnitude is Surabaya: its course is nearly circular, and its source and mouth are situated almost in the same latitude. It rises at the base of the volcano Arjuna, flows around Mount Kawi, and is a large river at Kediri, which name it then assumes. From the capital of this district to its mouths it is navigable

for large boats, and its course is steady and uninterrupted. Having crossed the district of Wirasáber and Jápán, it enters that of Surabaya. It discharges itself into the ocean through a tolerably extensive and very fertile delta, formed by five separate rivers.

Both the western and northern districts have their principal rivers, and most of them are navigable up to the maritime capitals for native vessels of considerable burthen:—

But they all have the disadvantage of being partially blocked up at their discharge by extensive bars and mud-banks, an evil which is extending with the increase of agriculture, by reason of the quantity of soil necessarily washed down in the process of irrigating the land for the rice cultivation. Most of them require the application of jetties or piers to deepen the passages at their entrance.

There are no lakes of any considerable size in Java, but some low lands are converted into swamps in the wet season.

One the northern coast the general aspect of Java is low, often swampy, and overgrown with mangrove-trees and bushes. The southern coast consists of very high perpendicular rocks and cliffs. The interior presents innumerable ranges of hills which serve to form and confine plains and valleys of various elevations and extent. On the northern side the ascent from the sea-coast is gradual, but in other parts, where the hilly country is nearer to the coast, the ascent is more abrupt. The interior and southern provinces may be reckoned among the most romantic and diversified in the world;

Uniting all the rich and magnificent scenery, which waving forests, never-failing streams, and constant verdure can present, heightened by a pure atmosphere, and the glowing tints of a tropical sun.

Quitting the low coasts of the north, in many parts unhealthy, the traveller can hardly advance five miles inland without feeling a sensible improvement in the atmosphere and climate. As he proceeds, at every step he breathes a purer air and surveys a brighter scene. At length he reaches the high-lands. Here the noblest forms of nature are tempered by the rural arts of man: stupendous mountains, clothed with abundant harvests, impetuous cataracts tamed to the peasant's will. Here is perpetual verdure; here are tints of the brightest hue. In the hottest season the air retains its freshness; in the driest, the innumerable rills and rivulets preserve much of their water. This the mountain farmer directs in endless conduits and canals to irrigate the land, which he has laid out in terraces for its reception; it then descends to the plains, and spreads fertility wherever it flows, till at last, by numerous outlets, it discharges itself into the sea.

In an island of such extent and variety of surface, the soil is necessarily various, but it is generally rich and remarkably deep; owing probably to the exclusively volcanic constitution of the country, and the constant accession of new mould, which is washed down the sides of the numerous mountains. It is much richer than the soil of the Malayan countries in general, and resembles the richest garden-mould of Europe: whenever it can be exposed to the inundations necessary to the growth of rice, it will yield without manure, and without impoverishment, one heavy and one light crop in the year: even the poorest soil repays the labour of cultivation. The red and very light soil of the western districts is generally considered inferior to the dark brown and stiffer soil which prevails in the eastern. The best soil is usually found near the beds of rivers, in the valleys, and on the slopes of the largest mountains; the worst on the ranges of low calcareous hills, which traverse different parts of the island.

In these regions, situated within about ten degrees of the equator, one eternal summer reigns, and the seasons are not recognised as hot and cold, but as wet and dry. In Java the seasons are regulated by the periodical winds. The period of the setting in of these winds is not determinable within a few weeks; but generally the westerly winds, always accompanied with rain, occur in October, become more steady in November and December, and

gradually subside; till in March or April, they are succeeded by the easterly winds and fair weather, which continue for the remaining half year. The heaviest rains occur in December and January, and the driest weather in July and August, when the nights are coldest and the days hottest. Hurricanes are unknown in Java, but thunder-storms are frequent, and the lightning is extremely vivid

In the vicinity of the hills, and elsewhere during the dry season, seldom a day passes without thunder and lightning; and although these grand exhibitions of nature cause less consternation, in general, within the tropics, than beyond them, it cannot be denied that they are destructive of many lives. Earthquakes are to be expected in a volcanic country, and are frequent in the vicinity of the volcanoes; but the European towns have never sustained any serious injury from them.

On the low northern shores the mean annual heat is 78°, but in the dry season the thermometer rises as high as 90°, and even higher in the afternoon. Its most usual range is from 70° to 74° at evening and morning, and from 83° to 85° in the afternoon. But one of the great advantages afforded by the physical constitution of this island is, that from the sea-shore to the elevated interior there is a regular diminution of temperature, at the rate of 2° or 3° for every ten miles. The mean temperature on the elevated plains is probably not more than 66° or 68°. A temperature of 72° is rarely known there. On the summits of the peaks it falls below freezing-point: ice as thick as a Spanish dollar has been found, and hoar-frost (called "the poisonous dew" by the natives), has been noticed on the vegetation of these higher regions.

Java was formerly considered one of the most unhealthy countries of the globe; a character belonging certainly to the greatest portion of the low coast along the Java sea; but the general inference drawn by professional men from the experience which the occupation of the island by the British has afforded, is, that in point of salubrity Java stands on a level with the healthiest parts of British India, or of any tropical country in the world.

The climate of the city of Batavia has ever been considered as one of the most baneful in the world. "It has even been designated the storehouse of disease; with how much justice, is too wofully demonstrated by the writings of those visitors who have survived its perils, and the records of the Dutch East India Company itself." Raynal states that between the years 1714 and 1776 there perished in the hospitals of Batavia above 87,000 soldiers and sailors. It appears also from the Dutch records that the total amount of deaths in this city, from the year 1730 to 1752, was more than a million.

To those who are acquainted with the manner in which the affairs of the Dutch East India Company were managed abroad, there will perhaps be no difficulty in laying rather at the door of the colonists, than of the nation, the crime of maintaining a commercial monopoly, at such a dreadful expense of lives as resulted from confining the European population within the narrow walls of this unhealthy city. That the sacrifice was made for that object, or to speak more correctly, under that pretext, for the private interests of the colonists who were entrusted with its details, can scarcely be doubted. From the moment the walls of the city were demolished, the draw-bridges let down, and free egress and ingress to and from the country was permitted, the population began to migrate to a more healthy spot, and they had not to go above one or two miles beyond the precincts before they found themselves in a different climate. But this indulgence, as it gave the inhabitants a purer air, so it gave them a clearer insight into the resources of the country, and notions of a freer commerce, which, of all things, it was the object of the local government and its officers to limit or suppress.

Necessity might have first determined the choice of the spot for the European capital; but a perseverance in the policy of confining the European population within its walls, after so many direful warnings of its insalubrity,

cannot but lead to the inference, that either the monopoly of the trade was considered a greater object to the nation than the lives of the inhabitants, or that the more liberal views of the government were defeated by the weakness or corruption of its agents.

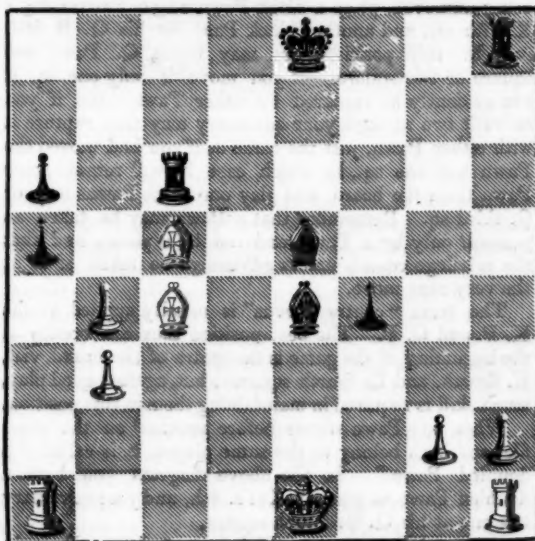
EASY LESSONS IN CHESS.

IV.

ALTHOUGH the move of the King is limited to one square at a time, yet, by a peculiar privilege, which, under certain conditions, may be exercised once during the game, a compound move is allowed, whereby the King moves over two squares. This compound move is made by playing K. R. or Q. R. up to the K., and then placing the K. on the other side of the R. thus moved. This is called CASTLING, or to CASTLE THE KING, and its object is generally to secure to the royal piece a place of greater safety, as also to bring a Rook into play. Sometimes, however, a player castles in order to escape from an attack, and, in such case, he will castle on his King's side, i.e., with K. R.; or, on his Queen's side, i.e., with Q. R., as may best suit his purpose.

The conditions under which castling is allowed are as follow:—1. The King must not be in check. 2. The King must not have been moved. 3. The Rook must not have been moved. 4. There must be no piece, either of your own or of your adversary, between the King and the Rook. 5. The King must not pass over, or to any square, attacked by one of your adversary's pieces or pawns.

The following diagram will serve to illustrate the important operation of castling.



In this position you are at liberty to castle either with your K. R., or with your Q. R. To castle with your K. R., or, on your King's side, you first play your K. R. to K. B. square, and then place your K. on K. Knt. square; this completes the operation of castling. To castle on your Queen's side, or with Q. R., you first play that piece to Queen sq. and then place your K. on Q. B. sq. Observe that, although your Q. R. is under the attack of your adversary's K. B., and although your Q. Knt sq. is commanded by his Q. B., yet you can still castle on your Queen's side, because the law which forbids the King, in castling, to pass over any square attacked by one of your adversary's pieces or pawns, is limited to the King only, and does not apply to the Rook.

You will observe that your adversary cannot castle on his King's side, because the K. B. sq., over which his King must pass, is commanded by your Q. B. and the

K. Knt. sq., to which he must pass, is commanded by your K. B. Nor can he castle on the Queen's side, because his Q. R. has been moved.

There are several peculiarities respecting the Pawns, with which you must become acquainted. Young players are apt to imagine that, because the supply of Pawns is liberal, and their value much less than that of the pieces, that they need not be greatly regarded. But the fact is, that to play the Pawns well is almost the same thing as to play chess well: it is the most refined and difficult part of the game, and Philidor owed much of his excellence to the surpassing skill with which he manœuvred his Pawns. We shall have abundant examples of the value of Pawns hereafter: at present, our information will be confined chiefly to some of their technicalities.

The names of the Pawns K. P., Q. P., K. B. P., &c., you are already acquainted with: other terms are in frequent use, such as Pawn takes Pawn *en passant*: Centre Pawns; Doubled Pawn; Passed Pawn; Isolated Pawn; to queen a Pawn; or, to advance a Pawn to Queen; To fork with a Pawn.

With respect to the first term, P. takes P. *en passant*, you know that the move of the Pawn is limited to one square forward when not capturing, and to one square obliquely forward when it captures. It has also been stated, that the Pawn is allowed to move, either one or two steps forward, at its *first* move; but when, in moving two steps, it passes over a square attacked by one of your adversary's Pawns, he has the option either of allowing the Pawn to be moved to its full extent, or of capturing it with his Pawn, just as if you had moved your Pawn but one square. For example, your Q. P. being unmoved, place a black Pawn on your adversary's K. fifth sq., and another black Pawn on his Q. B. fifth sq. In this position you may move Q. Pawn one square or two squares—if you move it only one sq. it can evidently be captured by either Pawn—and if you move it two squares your adversary may also capture it with either Pawn, just the same as if you had moved the Pawn but one sq., in which case he will remove your Pawn from the board, and play one of his Pawns to your Q. third sq. Remember that a Pawn may be taken *en passant* only by a Pawn and not by a piece; and that the privilege ceases, unless advantage be taken of it at the very next move.

The term "centre Pawns" is usually applied to the K. P. and Q. P. The best position they can occupy at the beginning of the game is the centre of the board, viz., K. fourth, and Q. fourth squares; but, against good play, much skill is required in maintaining them in this position.

When one Pawn stands before another on the same file, and both belong to the same player, it is called "a doubled Pawn." In the above diagram you have a doubled Pawn at your Q. Knt's 4th, and your adversary has one at his Q. R. fourth square.

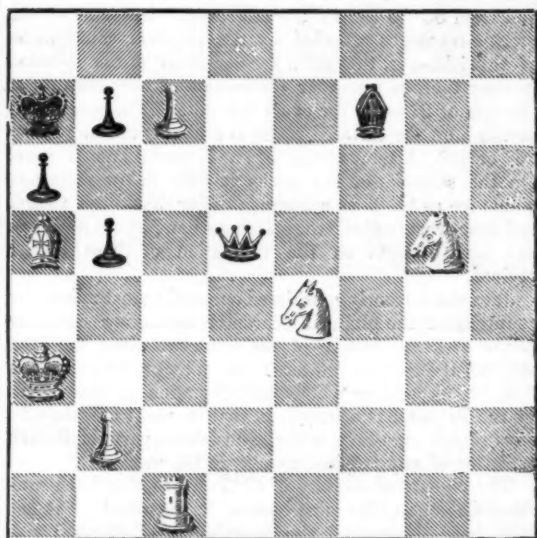
A passed Pawn is one which has no adverse Pawn in front of it, either on the same file, or advancing towards it on either of the adjoining files. Suppose you have a Pawn on your K. B's. file, and your adversary has no Pawn, either on his King's file or K. Knt's file, your Pawn is then said to be passed. Such a Pawn is very valuable because, in order to prevent it from being advanced to Queen, your adversary must oppose or capture it with a piece; in which case, if your Pawn be properly defended, you win a piece for a Pawn.

When a Pawn is entirely separated from other pawns it is said to be "isolated." You must be careful how you allow your Pawns to become isolated, because when in this condition they can be defended only by pieces; and these ought to be used rather as active warriors than as passive sentinels. A skilful player, however, will often be willing to isolate a pawn, if, at the same time, he "passes" it. In the diagrams which accompany this lesson you will find examples of isolated Pawns.

When a Pawn is advanced to the eighth square of the file it is said to be "queened," in which case you remove it from the square, and place thereon a piece in its stead.

The following problem will illustrate the advantage of the passed Pawn, and serve to remind you of a fact of which amateurs are frequently ignorant, i.e., that in queening a Pawn, such Pawn need not necessarily be exchanged for a Queen. You may claim a Rook, or a Bishop, or a Knight. And this privilege is allowed even though all the pieces remain on the board. It follows, therefore, that you may have two or more pieces, and three or more Rooks, Bishops, or Knights. Remember that the promotion of the Pawn is the immediate consequence of its attaining the eighth square. A move cannot be made until this promotion is made.

In this problem, if black have the move, he can check-mate you immediately, or, "on the move," as it is called. Endeavour to find out how he can do this. But, white having to move, you can force the mate in three moves.

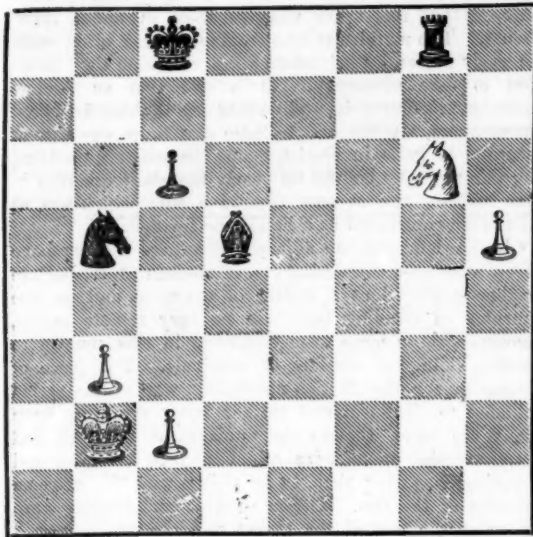


You first sacrifice your Bishop in order to get the adverse King into such a position that the mate can be effected in the shortest way. Therefore, by checking with the B. at Q. Knt. sixth, the King has the choice of moving to his Q. R. sq., or of capturing your B. If he move to his Q. R. sq. your advanced Pawn moves to Queen, becomes a Queen, and gives check-mate. His best move (when acting on the defensive, that which will prolong the game is generally called the best move), is to take the B., which he does accordingly. Now, although a Queen is the most valuable piece to get in exchange for a Pawn, yet it is not always the most advantageous. In the present case, if you claim a Queen for your Pawn, she will be of no use to you, because she does not give check, and your adversary can mate you if you cease to check him. To check him, by playing your Rook to Q. B. sixth is of no use, because the R. can be captured by K. or by Q. You, therefore, queen your Pawn, and, instead of claiming a Queen, you take a Knight, which thus gives check. He cannot capture the Knight, and has only one vacant square to which his King can move, because you will observe that your newly-created Knight not only checks the K. at his Q. Knt. third, but also commands his Q. R. second. His K. must, therefore, move to Q. R. fourth sq., when you can mate him immediately by a move which you will readily discover.

The following diagram illustrates a power which belongs to the Pawn and the Knight, of attacking two men at once: this is called *forking* them. For example, by

playing your Knight to K. seventh, you fork your adversary's K. and R. He must move his King out of check, and you capture the Rook: should he retake with his B., you are then said to *win the exchange*, a term which is used when you gain a Rook, in exchange for a Knight or a Bishop.

The power of forking also applies to the Pawn. In the above diagram, by playing Q. B. P. two sq. you fork his Kt. and B.: he cannot save both, and must either lose his Kt. by moving away his B., or, by taking the Pawn, lose his B. for a P.



ORANGES AND COFFEE.

Of all the new enjoyments of which the knowledge is acquired by a visit to the intertropical regions, those that reach us through a sense which in the Old World is productive of as many painful as pleasurable emotions are, in my opinion, the most exquisite. Without leaving Europe, a traveller may learn how delightful it is to take his early walk in an orange-grove during the season when the trees are in bloom; the gardens of the Tuilleries may give him a faint idea of it just before the ancient denizens of the *orangerie* have been despoiled of their crop of blossoms that the distiller may convert them into orange-flower water. But the fragrance of the Tuilleries is as inferior to that of the Moorish gardens of the Alcazar at Seville as these last, with all the care bestowed on them, are excelled by some neglected orange-grove in Cuba or St. Domingo. Nor is the rich fragrance of the orange-grove to be compared for a moment with the aromatic odours of a coffee-plantation, when its hundred thousand trees have just thrown out their unrivalled display of jessamine-like flowers, reminding you of what you may have read in Eastern fable of the perfumes of Araby the Blest.—TURNBULL'S *Cuba*.

Few will deliberately maintain that the acquisition of wealth, individual or natural, is the principal ingredient in human happiness. The rational moralist and the pious Christian will agree that the enjoyments which wealth affords are generally overrated, and the true welfare of man consists not in the extent of his possessions, or the gratifications they afford, but in the perfection of his moral and intellectual nature, and the improvement and employments of his active powers. At the same time the stoical doctrine which ascribes no value whatever to external enjoyments is inconsistent with the present state of humanity. The bountiful productions of nature are intended as a source of enjoyment, while the active powers we are endued with enable us to diversify and enlarge, while the exertion made for their attainment tends to improve these powers. The abundance of articles subservient to the comfort and convenience of life, provided they be not misapplied to intemperance, affords no inconsiderable addition to human happiness.—HAMILTON'S *Progress of Society*.

THE CARRIER-PIGEON.



THE CARRIER-PIGEON, (*Columba tabellaria*.)

THIS interesting bird has been known and celebrated from a remote period of antiquity, and nowhere has it been so extensively used as a means of carrying on epistolary correspondence as in that land of wonders and of poetry, the East. There, the vast distance of one inhabited district from another, and the imperfect nature of other means of communication, have contributed to render the carrier-pigeon a real treasure to the land. Before we proceed to describe the method of training and employing this bird as a messenger, we must notice its form and habits.

The carrier is a larger bird than our common pigeon, being about fifteen inches in length, and a pound and a quarter in weight. The plumage is remarkably compact, and is subject to much variety of colour; but may be described as in general either dun-colour or black. Blue and pie-bald varieties are occasionally seen, and are much prized by the curious in birds. The neck is long, and the pectoral muscles are very large, denoting a power of vigorous and long-continued flight. An appendage of naked skin extends across the bill, and hangs down as a sort of wattle on each side of the lower mandible. This skin is of a whitish colour, and has a rough and warty appearance. According to its size and shape, the amateurs of carrier-pigeons estimate the value of the bird. They consider those pigeons the best that have this appendage rising high on the head, and of considerable width across the bill, and that are also distinguished by a wide circle round the eyes destitute of feathers. The sellers of these birds sometimes employ artificial means to produce these appearances, and torture the pigeons by introducing a small piece of cork, fastened by a bit of wire beneath the skin, to enlarge its apparent width.

The instinct which renders this bird so valuable to

man is founded upon a very high degree of the *love of home*. We find the same instinct exhibited by many other animals in various ways; but, the pre-eminent degree in which it rules this particular species of pigeon causes the bird to find its way from any distance to the spot where it has reared its young, or has met with the customary gratifications of home. This natural instinct has been aided by precautionary measures on the part of man, in order that there may be no failure in the diligence and promptness of the expected messenger.

The method of training the young birds in Turkey is as follows. The person who has the charge of rearing and training them (and in that country it is a common practice to keep such a person in the seraglios of the great,) watches for the arrival of the young pigeons at their full strength of wing, and then takes them hood-winked, or in a covered basket, to a distance of about half a mile from their home. They are there set at liberty, and if any of them fail in returning home from this short distance they are considered as valueless, and no farther trial is made of their powers; but all those that return directly and speedily are carried a mile, then two, four, eight, &c., and so on to greater and greater distances, till they will at length return with certainty from the farthest parts of the kingdom. It is obvious that in order to have messages conveyed by these birds they must be reared in one place, and then sent to the place whence they are to return with tidings. For instance, every Turkish bashaw has a basket full of these pigeons sent to him from the grand seraglio, and on the appearance of insurrection or other emergency in his district, he has only to let loose one of the pigeons with a letter to communicate the tidings. He braces a letter under one of the wings, without in the least incommoding the bird, or hindering its flight; but lest this messenger should be shot, or struck by a hawk, five or six are generally dispatched with similar messages, and thus communications are made in the most speedy manner that could possibly be contrived. In the fourteenth century the dispatches sent by carrier-pigeons to various parts of Turkey amounted to a regular system of posting. Slight towers were built at thirty or forty miles' distance from each other, and in these towers sentinels kept watch to receive the birds, and transmit the intelligence which they had brought, by other birds. The notice was inscribed on a thin slip of paper, inclosed in a small gold box, nearly as thin as the paper itself, and tied round the neck of the bird. The hour of arrival and departure was marked at each successive tower, and for greater security a duplicate was always dispatched two hours after the first. But the mode generally employed in conveying intelligence by these birds, is to write the necessary information on very fine paper, and in the East there is a peculiar sort adapted to this purpose, and called *bird-paper*, and to place it lengthwise under the wing, fastening it with a pin and taking precautions to prevent the pin from pricking the bird, and also to keep the paper from becoming inflated with air.

The use of the carrier-pigeon as a messenger was celebrated by the poets of Arabia, Greece, and Rome. Historians also make frequent mention of it, as bearing intelligence with wonderful rapidity, and as affording the most important benefits to besieged cities. Ælian mentions that when Taurostheus was victor at the Olympic games, a carrier-pigeon bore the intelligence to his father with great rapidity. Pliny relates that at the siege of Modena a correspondence was carried on, by means of these birds, between Decimus Brutus and Hirtius. "Of what avail," says he, "were sentinels, circumvallations, or nets obstructing the rivers, when intelligence could be conveyed by aerial messengers?" Carrier-pigeons were also extensively employed in the time of the Crusades, and instances are given where the birds sent out by the besieged were captured by the

besieging parties, and let loose again, with a message calculated to deceive those to whom they were sent. In such instances the pigeons were brought down uninjured by hawks kept for that purpose, by the parties investing the town.

These extraordinary birds have been employed to serve the purposes of commerce, as well as those of war. When the Turkey company of England was flourishing, and a number of English merchants were resident at Aleppo, carrier-pigeons were in constant employ to bring intelligence from the port to the city. The port of Scanderoon is at the distance of forty leagues from Aleppo, but this space was traversed in about three hours. The merchants who employed these birds, were in early possession of information, of which they failed not to take advantage. It is said that an Aleppo merchant having accidentally killed one of these feathered messengers, was the first to learn that there was a great scarcity of galls in England, and immediately profiting by this news, he bought up nearly the whole quantity in the market, and at once cleared a sum, which was at that time considered as a handsome fortune.

In England and the adjacent countries pigeons have been little used as messengers, in modern times, but are rather employed as a matter of curiosity, and for the purpose of deciding bets. In no very remote period, however, these birds were employed in this country to convey tidings of the fate of criminals. The place of execution for the British metropolis, was, at the period alluded to, Tyburn, and thither many criminals were conveyed, who, though the punishment of death had been awarded them, were intended to be disgraced and imprisoned, rather than to be visited with the extreme penalty of the law. Hence pardons and respites were given at the foot of the gibbet, and the uncertainty in which the relatives and friends of the condemned were kept to the last, made it a time of intense anxiety, especially when, as in former days, the criminal was frequently of somewhat elevated rank. Carrier-pigeons were therefore sent to Tyburn before the time of the expected execution, and were dismissed with the important news of life or death, as soon as all was over. But the employment of these birds among us at present, consists of little more than experiments, such as the following: on the 11th of July, 1819, thirty-two pigeons, with the word "Antwerp" marked on their wings, and which had been reared in that city, were let loose in London at seven o'clock in the morning, after having their wings countermarked with the name of the British metropolis. The same day, at noon, one arrived at home, and obtained the first prize; a quarter of an hour after another arrived, and obtained the second prize. The following day twelve others arrived, making fourteen in all; what became of the others we are not told. Another experiment was made in July, 1829, in consequence of wagers laid at Maestricht, between some merchants there, that pigeons taken to London, would, when loose, return in six hours. Forty-two pigeons were brought to London, and, after being properly marked, were thrown up at twenty-six minutes past eight in the morning. The principal wager was for ten thousand guilders, and would have been gained had any one of the birds arrived at Maestricht within six hours; but owing, as it was supposed, to heavy rain, the first did not arrive till six hours and a quarter from the time of leaving London, having nevertheless travelled at the rate of forty-five miles an hour. The second arrived in seven hours, the third in seven hours and ten minutes, the fourth in seven hours and a half, and in four days more than twenty had reached their place of destination.

There are two inferior varieties of carrier-pigeons that have been reared to a considerable extent in England; these are commonly called the *dragoon* and the *horseman*. The author of a treatise on domestic pigeons, published in 1765, tells us that a gentleman of his acquaintance

having a small wager depending, sent a dragoon by the stage coach to his friend at St. Edmond's-Bury, together with a note, desiring that the pigeon, two days after its arrival there, might be thrown up precisely when the town clock struck nine in the morning, which was accordingly executed, and the pigeon arrived in London, and flew to the sign of the Bull Inn, in Bishopsgate Street, into the loft, and was there shown at half-past eleven o'clock the same morning on which he had been thrown up at St. Edmond's-Bury, having flown seventy-two miles in two hours and a half.

Recent experiments seem to establish forty miles an hour, or a thousand miles in a day, as the average flight of the carrier-pigeon.

GOLD AND IRON—A COMPARISON.

MANY persons find it difficult to explain why those countries which possess gold and silver mines are not uniformly rich; they read of the conquest of America by the Spaniards, and of the numerous and extensive mines of precious metal which came into the possession of the conquerors; they observe also how willing persons of all classes are to exchange a large quantity of most other metals for a small amount of gold; and yet those countries which produce gold and silver are politically, commercially, and socially, poor. Why is this? Many causes operate to produce the effect; but on the present occasion we select a mode of explanation which is calculated to find favour with a people who owe their riches to well-directed industry and well-regulated commerce.

So long as the metals, or their ores, remain buried in the earth, their practical value is nothing, but the moment they are brought to its surface they begin to acquire a gradual and perceptible value, because the first step is taken towards giving them a useful application; but when the metal has been extracted from the ore its value becomes indefinitely extended, because it can then be moulded and shaped into some of those numerous articles which the skill of man has contrived.

We see then that the crude ore becomes invested with value by being raised to the surface of the earth: the labour and skill employed in extracting the pure metal greatly enhances the value: if we now trace the metal through a few of its subsequent transformations, we shall find its value to increase in proportion to the amount of labour and skill bestowed upon it.

One pound of iron, in the state in which it leaves the ore, is worth about a half-penny; and as a half-penny weighs but half an ounce, the copper of which it is formed is thus worth about about thirty times an equal weight of iron. The chief cause of this difference is—not that the copper is in itself so much more valuable than iron—but that so much larger an amount of labour has been bestowed upon it than upon the iron; it has been extracted from the mine, separated from the earthy and other impurities, brought to the pure metallic form, rolled into a thin sheet, cut into small circular pieces, and then stamped with the devices which give it the denomination of a half-penny. But great as is this difference between the value of iron and copper, it sinks into insignificance when compared with the difference between iron and gold. At the rate of 6*l.* per ton (at which pig-iron has been often sold of late years), one sovereign would purchase about three hundred and seventy pounds weight of iron; but as it requires about forty-six sovereigns to make one pound weight of gold (omitting the value of the alloy), we must multiply the quantity to this extent, and we shall thus find that one pound weight troy of gold is worth about seventeen thousand times as much as an equal weight of pig-iron, and as the latter is sold by avoirdupois weight, in which the pound is greater than the troy pound, the real marketable difference in price is still more extensive

than that here indicated. The value of silver being between a fifteenth and a sixteenth part of that of gold, we find it to be somewhat more than a thousand times that of the iron; and thus we arrive at the result, that coined copper, silver, and gold, are worth, respectively, about thirty, ten or eleven hundred, and seventeen thousand times as much as equal weights of pig-iron.

It is by hearing of such calculations as these that we become insensibly impressed with the idea of vast wealth, in relation to the gold and silver mining districts of America, and we are apt to wonder how such countries can possibly be otherwise than rich and flourishing. But before this question can be rightly understood it is necessary to trace the crude iron to some of its subsequent forms, and see how it becomes altered. Anvils, vices, and a large number of articles made of iron, and in which no very great nicety of workmanship is required, are sold at from fourteen to twenty shillings per cwt.: this is at the rate of from three halfpence to two pence per pound, so that the value of the iron has been increased three or four fold by the labour of forming it into these articles. But when we come to the more carefully manufactured articles of iron, and especially in that form to which we give the name of steel, the value of a pound of metal increases in a prodigious ratio. In the finest kinds of working tools, in cutlery, and in numerous small articles of steel, this increase is very observable. Generally speaking, each single article contains a very small weight of metal, and the purchaser pays for the labour and the skill bestowed, rather than for the metal itself. Many of such articles, as well as others made of other metals, are mentioned in an Act of Parliament of the reign of Henry the Seventh, passed for the prohibition of the importation of manufactured articles from abroad; whereby "merchaunt straungers" were forbidden to bring into England "mans gyrdylles, harynis wrought for gyrdylles, poynts, laces of lede, purses, pouches, pynnes, knyvyys, hangers, taylour-sherys, sesors, yrens, cobords, tonges, fyver-forkes, grydyrens, grydyren stocks, cocks, keys, hinges, ayny betyn gold, or betyn silver, horse harneys, bittes, storoppes, bokelles, chaynes, latyn nayles with yren shonkes, currets, stondynge condlestickes, hongying condlestickes, holy-water scoppers, chafyinge dyshes, hongying lavers, curten rynges, clospos for gloves, bokelles for shoys (*i.e.* shoes), spones of tynn and lede, cheynes of wyre, as well laten as of silvere," &c. Most of the articles here enumerated, and which are now made at Birmingham and Sheffield, would well illustrate the value which labour imparts to raw material.

It is not perhaps generally known that sewing needles, cheap as they are, in some instances attain a value which brings them on a level with the "precious" metals. A practical writer on this subject says, that needles of the most exquisite delicacy and finish exhibit one of the rarest proofs of the value conferred by manual labour upon a material, in its original state of small nominal price, for some of the finest sorts are worth considerably more than their weight in gold. The same writer, when speaking of the manufacture of the springs of watches, makes a statement in relation to the value which labour imparts to raw material almost inconceivable:—

Both the main and the hair-springs of watches are made of steel, first drawn into wire. In the former description of spring, the workman gives to the material its wonderful elasticity by hammering it out upon an anvil; it is then ground, hardened, coiled, and tempered by blueing as we see it. The manufacture of the latter article has frequently been selected as an illustration of the extent to which the value of a material of small intrinsic worth may be raised by the application of industry and ingenuity. A pound of crude iron costs one half-penny; it is converted into steel; that steel is made into watch-springs, every one of which is sold for half-a-guinea, and weighs only the tenth of a grain; after deducting for waste, there are in the pound weight

seven thousand grains; it therefore affords steel for seventy thousand watch springs, the value of which, at half-a-guinea each, is thirty-five thousand guineas!

It will thus be seen, even if we confine our attention to the manufacture of needles only, that the relative values of gold and iron really depend on the labour bestowed upon them, rather than upon any intrinsic value in the metals themselves. But still, as a pound of gold is worth many thousand times the value of a pound of iron in an equally un-manufactured state, it would seem that the gold-producing countries ought to be surpassingly rich. It is found, however, that the wages and maintenance of the miners employed in the gold and silver mines, the apparatus, generally of a rude and inefficient kind, which they employ, the want of good roads for the conveyance of the gold and ore from the mines to the shipping-ports, and the length of time consumed in the preparation of a small quantity of gold, eat into the profits of the mining proprietor so largely as to dissipate the dreams of enormous wealth which are often entertained. The same principles do in fact regulate the profits of a mine of gold or silver as one of iron or copper; for the owner has to pay for the labour expended in the extraction of the metal, and it is easily conceivable that a mine of gold may be absolutely valueless to the proprietor, by the quantity of metal being so small, and the depth of the mine so great, as to consume the entire value of the gold in the wages of labour. This circumstance has in fact often led to the abandonment of veins or mines of gold and silver, not because the metal has ceased to be found, but because the expense of procuring would nearly or quite equal the price obtained for it.

We see therefore that in estimating the wealth of such countries as Mexico and Peru, the possession of gold and silver mines is not incompatible with national poverty; for if the general industry and manufacturing energy of the inhabitants is in a languid state, the mines of precious metal will not alone lead to national prosperity. Humboldt estimated the total value of gold and silver brought from America at the beginning, of the present century, at about nine millions sterling annually; and Mr. Jacob supposed the value to be not much above four millions annually, between 1809 and 1829. Even if we take the highest of these estimates, what is it compared with the value of some articles of English manufacture? Our cotton goods alone amount to the value of thirty millions sterling annually, and the iron produced, even in the rough state of bars and rods, has been estimated at six millions annually.

So far from a gold-producing country being rich and prosperous, it would almost seem that in the possession of that which all men covet, is the source of much of its poverty and misery. The horrid details which abound in the history of South America result from the "cursed lust for gold;" and the desolate appearance of many tracts of that wide continent has been produced by the search for that metal. Dr. Walsh mentions that at a very early period two parties meeting on the banks of the river, where San José was afterwards built, instead of agreeing in their objects, and pursuing together their operations, set upon each other like famished tigers, impelled by a hunger still more fierce—the cursed lust of gold. A bloody encounter ensued, in which many were killed on both sides, and the river was from that time called the Rio das Mortes, or the River of Deaths.

The vicinity of this river everywhere attests the extensive search for gold formerly pursued here, as it was for a length of time considered one of the richest parts of Brazil, from the profusion of the precious metal found on its surface. All the banks of the stream are furrowed out in a most extraordinary manner, so as to be altogether unaccountable to one unacquainted with the cause. The whole of the vegetable mould was washed away, and nothing remained but a red earth, cut into square channels, like

troughs, with a narrow ridge interposed between them. Above was conducted a head stream of water, let down through these troughs, which were all on an inclined plane. The lighter parts of the clay were washed away, and the gold remained behind.

Dr. Walsh visited the farm of a gentleman who had been seduced from agricultural operations by the indications of the presence of gold upon his lands. After describing the modes of collecting the gold dust, and extracting the precious metal, he examines the matter with a commercial eye. At this "harvest home" of gold, as he aptly terms it, the quantity collected was about four pounds' weight, which at eighty shillings per ounce, would give two hundred pounds sterling, apparently a rich, but in reality, a very unprofitable and ruinous mode of farming. The proprietor had seven or eight blacks daily employed, for three hundred days, collecting the gold dust: these blacks he first bought, and then fed, and clothed and supported, which left in the end but little or no real profit. But by far the most ruinous effect was that produced on his farm.

As we passed through it, for several hundred acres every green thing had disappeared, and left behind a red desert, of the most irksome and barren aspect, on which nothing hereafter would be found to grow in any given period, as no new soil is formed, and the old workings appear as recent as those from which the vegetable mould had been washed but yesterday: and thus, in extracting the gold from his farm, the proprietor had extracted along with it every particle of productive riches also.

Such (says Mr. Holland) is the aspect, in general, of those regions where the search for the precious metals is carried on, whether by washing the diluvial deposits, or by subterranean excavations: to the evil in the latter case has to be added the immense waste of negro life, as the auriferous soils, in most tropical climates, are peculiarly unhealthy.

In these few remarks we have purposely omitted to contrast the abundance of iron with the scarcity of gold; nor have we noticed the physical qualities of the precious metals, which impart value to them independently of their scarcity. Our object is to show that national industry is of far more value than mines of gold and silver: possessing these, a country may be very poor; whereas by well-directed industry, a value may be imparted to humble materials greatly surpassing that of the precious metals; to give in fact, in one year, to a mass of cotton fibres a value very far exceeding that of all the mines and streams of America during the same period.

THE perfections of animals afford perpetual scope for reflection and improvement. We can gaze with unsated admiration on the fleet hound, the graceful colt, the frolicsome kitten, the soaring eagle, the far-seeing hawk, the majestic elephant, the brilliant peacock, the gentle fawn, the strutting cock, and the stately war-horse. Every individual of the vast host of animated creation, whether bird, beast, fish, or insect, displays qualities fitted, with unerring precision, to its wants. It fills us with amazement to discover such a variety of adaptation to the external world and to ourselves, and to find that creatures so limited should be able to maintain their place amidst a scene of such conflicting interests. Instructive, however, as the spectacle is, it becomes still more so when we reflect that the Deity has thus arranged it; that it is He who has thus adjusted the different parts to each other, and to the whole, and that to Him they owe their order, their utility, and their existence. Most thinking minds have speculated on what they should feel, were they permitted to witness the scenes of other worlds; yet how many pass through life without being once awakened to a perception of the vast expanse, the magnificence and the variety of that in which they dwell!—DR. MAC CORMAC.

LONDON:

JOHN WILLIAM PARKER, WEST STRAND.

PUBLISHED IN WEEKLY NUMBERS, PRICE ONE PENNY, AND IN MONTHLY PARTS, PRICE SIXPENCE.

Sold by all Booksellers and News-vendors in the Kingdom.